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ANALYSIS OF CONTRACTS AWARDED CALENDAR YEAR 1969

REVISED

PREPARED BY THE
MONTANA STATE HIGHWAY COMMISSION
PLANNING SURVEY SECTION
IN COOPERATION WITH THE
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

1969 CONTRACT ANALYSES

A revised 1969 Analysis of Contracts awarded is being submitted with the 1970 report due primarily to program changes including the omission of Engineering and State supplied materials.

In order to insure uniformity in the reporting method, the 1969 data was revised to reflect the changes made in 1970.

CONTRACT ANALYSES
Calendar Year 1969

FOREWORD

The attached tabulations have been prepared from the Detailed Estimate and Contract Award sheet for all contracts awarded during the calendar year 1969. A brief explanation of each of the following tables is provided to help in the interpretation of the figures and to lessen the possibility of erroneous conclusions.

Table 1 - Summary of New and Reconstructed Roadway Only, by County and Financial District.

This table is intended to inform the user of how many actual miles of roadway were let to contract and the costs involved. It includes all items pertinent to the same section of roadway except structures.

Table 1A - Summary of Total Amounts Awarded by County and Financial District.

This table is a total of all miles and costs involved regardless of the type of project. Besides roadway costs, it includes signing, lighting, fencing and bridge projects.

Table 2 - Summary of Roadway Mileage Awarded by Systems.

The table involves the same type of construction as Table 1. Table 2, however, provides a cost per mile figure for the different systems and also provides a simple analysis of benefits by inclusion of the "cost per annual vehicle mile."

Table 3-3a-3c - Summary of Type of Construction.

A separate table has been prepared for each Federal Aid System with all projects including signing and Fencing classified into 10 different categories. The purpose of this table is to give a general indication of what type of construction is responsible for the major share of monies spent. For example, note the bulk of Interstate monies is spent for New Construction, whereas, the greater share for Primary and Secondary is spent for Reconstruction.

Table 4-4a-4c - Summary by Surface Type by Systems.

These tables indicate the average cost per mile of various items included in a completed roadway by type of surfacing. Caution should be exercised in using the average cost per mile data due to the small sample involved for some cost items.

Table 5 - Summary of Roadway Mileage Awarded by Number of Traffic Lanes.

This table deals with the same miles and costs involved in Tables 1 and 2.

Table 6-6a-6c-6d - Summary of Structures by Type.

These tables summarize the number of structures let by type and also provide a cost per square foot, by type of structure.

Table 7-7a-7c - Summary of Roadway Mileage Awarded by ADT.

The table involves only actual roadway constructed, as Tables 1, 2 and 5 and provides a relationship between the volumes of traffic, miles constructed and costs. It is possible to further develop this table to obtain a road user benefit on a vehicle mile basis.

Table 8 - Summary of Contracted and Non-contracted Costs by System.

Some items, such as railroad flagging, roadway materials, detours and traffic control devices are considered non-contract items in certain instances. The costs of such items are included in the Detailed Estimate, but not in the Contract Award Amount. This table tabulates the two costs for the users information.

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1969

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED

DECEMBER 31, 1970

TABLE 1

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
FLATHEAD			.240	149,386					.240	149,386
LAKE			7.198	1,274,165	.469	95,959			7.667	1,370,124
LINCOLN			3.886	1,673,711					3.886	1,673,711
FD #01			11.324	3,097,262	.469	95,959			11.793	3,193,221
HILL			1.319	157,276	6.217	345,139			7.536	502,415
TOOLE	9.216	1,878,082							9.216	1,878,082
FD #02	9.216	1,878,082	1.319	157,276	6.217	345,139			16.752	2,380,497
PHILLIPS					10.832	683,613			10.832	683,613
ROOSEVELT			7.641	1,070,220					7.641	1,070,220
VALLEY					9.272	692,757			9.272	692,757
FD #03			7.641	1,070,220	20.104	1,376,370			27.745	2,446,590
CUSTER			7.734	1,475,527					7.734	1,475,527
FD #04			7.734	1,475,527					7.734	1,475,527
FERGUS					4.537	371,009			4.537	371,009
FD #05					4.537	371,009			4.537	371,009
CASCADE	12.739	3,232,048	3.092	1,661,738					15.831	4,893,786
CHOUTEAU			1.223	179,218					1.223	179,218
JUDITH BASIN					5.319	254,749			5.319	254,749
TETON					5.974	425,617			5.974	425,617
FD #06	12.739	3,232,048	4.315	1,840,956	11.293	680,366			23.347	5,753,370
JEFFERSON	5.397	1,816,194			3.920	508,276			9.317	2,324,470
LEWIS & CLARK					4.345	265,915			4.345	265,915
FD #07	5.397	1,816,194			8.265	774,191			13.662	2,590,385
GRANITE	3.131	1,148,271							3.131	1,148,271
MISSOULA	22.398	10,479,162							22.398	10,479,162
POWELL					2.966	468,477			2.966	468,477
SANDERS			4.731	1,084,108					4.731	1,084,108
FD #08	25.529	11,627,433	4.731	1,084,108	2.966	468,477			33.226	13,180,018

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1969

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED

DECEMBER 31, 1970

TABLE 1

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
BEAVERHEAD	15.173	4,352,803			3.608	522,857			18.781	4,875,660
SILVER BOW			1.298	836,028					1.298	836,028
FD #09	15.173	4,352,803	1.298	836,028	3.608	522,857			20.079	5,711,688
GALLATIN			.587	243,627					.587	243,627
WHEATLAND			5.982	936,867					5.982	936,867
FD #10			6.569	1,180,494					6.569	1,180,494
CARBON					.437	67,194			.437	67,194
STILLWATER					7.452	544,891			7.452	544,891
YELLOWSTONE			.623	407,785					.623	407,785
FD #11			.623	407,785	7.889	612,085			8.512	1,019,870
CARTER					9.085	587,623			9.085	587,623
ROSEBUD	17.018	4,434,636							17.018	4,434,636
FD #12	17.018	4,434,636			9.085	587,623			26.103	5,022,259
TOTAL	85.072	27,341,196	45.554	11,149,656	74.433	5,834,076			205.059	44,324,928

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED BY COUNTY AND FINANCIAL DISTRICT DURING CALENDAR YEAR 1969

TABLE 1A

DECEMBER 31, 1970

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
FLATHEAD			.240	149,386	35.000	19,279			35.240	168,665
LAKE			14.396	1,276,680	.469	95,959			14.865	1,372,639
LINCOLN			4.061	1,887,503	21.500	10,221			25.561	1,897,724
FD #01			18.697	3,313,569	56.969	125,459			75.666	3,439,028
GLACIER			6.873	56,706	.030	64,900			6.903	121,606
HILL			1.332	201,171	6.217	345,139			7.549	546,310
TOOLE	9.216	2,289,239							9.216	2,289,239
FD #02	9.216	2,289,239	8.205	257,877	6.247	410,039			23.663	2,957,155
DANIELS					18.600	5,994			18.600	5,994
PHILLIPS					10.832	683,613			10.832	683,613
ROOSEVELT			7.662	1,159,209	99.600	15,659			107.262	1,174,868
SHERIDAN					14.362	299,499			14.362	299,499
VALLEY					61.672	704,362			61.672	704,362
FD #03			7.662	1,159,209	205.066	1,709,127			212.728	2,868,336
CUSTER			10.834	1,632,917					10.834	1,632,917
DAWSON	7.912	23,023	80.800	70,048					88.712	93,071
PRAIRIE	22.907	3,377,242							22.907	3,377,242
FD #04	30.819	3,400,265	91.634	1,702,965					122.453	5,103,230
FERGUS			16.300	3,865	4.580	485,902			20.880	489,767
FD #05			16.300	3,865	4.580	485,902			20.880	489,767
CASCADE	21.000	9,018,606	3.092	1,715,844					24.092	10,734,450
CHOUTEAU			1.223	179,218	86.900	20,891			88.123	200,109
JUDITH BASIN			52.500	17,094	5.319	254,749			57.819	271,843
PONDERA			.308	30,004					.308	30,004
TETON					5.991	471,625			5.991	471,625
FD #06	21.000	9,018,606	57.123	1,942,160	98.210	747,265			176.333	11,708,031
BROADWATER	2.553	532,124							2.553	532,124
JEFFERSON	28.720	5,262,428	4.323	5,576	7.840	516,262			40.883	5,784,266
LEWIS & CLARK	5.419	2,978,867			4.345	265,915			9.764	3,244,782
FD #07	36.692	8,773,419	4.323	5,576	12.185	782,177			53.200	9,561,172
GRANITE	3.131	1,158,159	35.800	16,844					38.931	1,175,003
MINERAL		8,595								8,595

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED BY COUNTY AND FINANCIAL DISTRICT DURING CALENDAR YEAR 1969
TABLE 1A

DECEMBER 31, 1970

COUNTY AND	INTERSTATE SYSTEM		PRIMARY SYSTEM		SECONDARY SYSTEM		OTHER SYSTEMS		ALL SYSTEMS	
FINANCIAL DISTRICT	MILES	COST	MILES	COST	MILES	COST	MILES	COST	MILES	COST
MISSOULA	22.618	11,429,544		97,858					22.618	11,527,402
POWELL		14,832			2.966	468,477			2.966	483,309
SANDERS			4.731	1,136,623	32.200	14,110			35.931	1,120,733
FD #08	25.749	12,611,130	40.537	1,251,325	35.166	482,587			101.452	14,345,042
BEAVERHEAD	15.244	4,875,581			3.619	573,345			18.863	5,448,926
DEER LODGE			17.600	7,610					17.600	7,610
SILVER BOW	6.096	33,004	1.303	956,911					7.399	989,915
FD #09	21.340	4,908,585	18.903	964,521	3.619	573,345			43.862	6,446,451
GALLATIN	13.950	3,615,303	.587	253,786		9,560			14.537	3,878,649
MEAGHER			57.728	258,825					57.728	258,825
PARK		7,900								7,900
WHEATLAND			29.676	1,185,571	4.878	99,406			34.554	1,284,977
FD #10	13.950	3,623,203	87.991	1,698,182	4.878	108,966			106.819	5,430,351
BIG HORN	5.946	1,613,275				32,364			5.946	1,645,639
CARBON					.486	234,540			.486	234,540
MUSSELSHELL					7.824	214,282			7.824	214,282
STILLWATER	28.626	4,642,448			7.452	544,891			36.078	5,187,339
TREASURE					.825	8,715			.825	8,715
YELLOWSTONE	16.481	51,861	.623	407,785					17.104	459,646
FD #11	51.053	6,307,584	.623	407,785	16.587	1,034,792			68.263	7,750,161
CARTER					9.085	587,623			9.085	587,623
ROSEBUD	17.097	5,473,126							17.097	5,473,126
FD #12	17.097	5,473,126			9.085	587,623			26.182	6,060,749
TOTAL	226.916	56,405,157	351.998	12,707,034	452.592	7,047,282			1031.506	76,159,473

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY SYSTEMS
DURING CALENDAR YEAR 1969
THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAYS
TABLE 2

DECEMBER 31, 1970

SYSTEM	MILEAGE	TOTAL COST	COST PER MILE	ANNUAL VEHICLE MILES	COST PER ANNUAL VEHICLE MILE
RURAL					
INTERSTATE RURAL	84.797	27,297,031	321,910	52,350,490	00.521
PRIMARY RURAL	39.668	7,871,014	198,422	19,177,830	00.410
SECONDARY RURAL	73.964	5,738,117	77,579	3,161,265	01.815
OTHER					00.000
SUBTOTAL RURAL	198.429	40,906,162	206,150	74,689,585	00.547
MUNICIPAL					
INTERSTATE MUNICIPAL	.275	44,165	160,600	87,235	00.506
PRIMARY MUNICIPAL	5.886	3,278,642	557,023	15,388,400	00.213
SECONDARY MUNICIPAL	.469	95,959	204,603	148,920	00.644
OTHER					00.000
SUBTOTAL MUNICIPAL	6.630	3,418,766	515,650	15,624,555	00.218
TOTAL BY SYSTEM					
INTERSTATE	85.072	27,341,196	321,388	52,437,725	00.521
PRIMARY	45.554	11,149,656	244,756	34,566,230	00.322
SECONDARY	74.433	5,834,076	78,380	3,310,185	01.762
OTHER					00.000
GRAND TOTAL	205.059	44,324,928	216,156	90,314,140	00.490

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION DURING CALENDAR YEAR 1969 BY SYSTEM
TABLE 3

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	INTERSTATE	
	MILES	COST
RURAL		
NEW CONSTRUCTION	78.650	26,092,856
RECONSTRUCTION		
ADD TWO LANES	6.147	1,204,175
MAJOR STRUCTURES	1.190	11,731,186
RESURFACE		
STAGE CONSTRUCTION	71.168	15,163,535
TRAFFIC CONTROL, SEEDING & FENCING	62.059	277,070
REST AREA, WEIGH STN & SENIC OVERLOOK		486,354
WIDENING ROADWAY		
OTHER	4.684	142,983
TOTAL		55,098,159
MUNICIPAL		
NEW CONSTRUCTION	.275	44,165
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		805,328
RESURFACE		
STAGE CONSTRUCTION	1.912	435,389
TRAFFIC CONTROL, SEEDING & FENCING	.831	22,116
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		1,306,998
ALL CONSTRUCTION		
NEW CONSTRUCTION	78.925	26,137,021
RECONSTRUCTION		
ADD TWO LANES	6.147	1,204,175
MAJOR STRUCTURES	1.190	12,536,514
RESURFACE		
STAGE CONSTRUCTION	73.080	15,598,924
TRAFFIC CONTROL, SEEDING & FENCING	62.890	299,186
REST AREA, WEIGH STN & SENIC OVERLOOK		486,354
WIDENING ROADWAY		
OTHER	4.684	142,983
TOTAL		56,405,157

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1969
BY SYSTEM
TABLE 3A

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	PRIMARY I	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION	39.668	7,871,014
ADD TWO LANES		
MAJOR STRUCTURES	.121	457,428
RESURFACE	9.428	241,361
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	291.792	173,713
REST AREA, WEIGH STN & SENIC OVERLOOK		47,000
WIDENING ROADWAY	.333	61,484
OTHER		154,040
TOTAL		9,006,040
MUNICIPAL		
NEW CONSTRUCTION	.587	243,627
RECONSTRUCTION	5.299	3,035,015
ADD TWO LANES		
MAJOR STRUCTURES	.010	142,929
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	4.760	194,173
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		85,250
TOTAL		3,700,994
ALL CONSTRUCTION		
NEW CONSTRUCTION	.587	243,627
RECONSTRUCTION	44.967	10,906,029
ADD TWO LANES		
MAJOR STRUCTURES	.131	600,357
RESURFACE	9.428	241,361
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	296.552	367,886
REST AREA, WEIGH STN & SENIC OVERLOOK		47,000
WIDENING ROADWAY	.333	61,484
OTHER		239,290
TOTAL		12,707,034

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION DURING CALENDAR YEAR 1969 BY SYSTEM

TABLE 3C

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	SECONDARY	
	MILES	COST
RURAL		
NEW CONSTRUCTION	2.966	468,477
RECONSTRUCTION	70.998	5,269,640
ADD TWO LANES		
MAJOR STRUCTURES	.120	378,735
RESURFACE	4.878	99,406
STAGE CONSTRUCTION	22.186	513,781
TRAFFIC CONTROL, SEEDING & FENCING	349.620	104,486
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.855	115,539
TOTAL		6,950,064
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION	.469	95,959
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	.500	1,259
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		97,218
ALL CONSTRUCTION		
NEW CONSTRUCTION	2.966	468,477
RECONSTRUCTION	71.467	5,365,599
ADD TWO LANES		
MAJOR STRUCTURES	.120	378,735
RESURFACE	4.878	99,406
STAGE CONSTRUCTION	22.186	513,781
TRAFFIC CONTROL, SEEDING & FENCING	350.120	105,745
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.855	115,539
TOTAL		7,047,282

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969
TABLE 4 INTERSTATE SYSTEM DECEMBER 31, 1970

COST ITEM		STAGE	SURFACE TYPE		ALL	MISC.
		CONSTR.	BITUM. MIX	CONCRETE	CONST.	ITEMS
GRADING	MILES	20.559	112.502	17.495	150.556	
	COST	3,400,101	9,326,625	1,109,785	13,836,511	
	COST/MILE	165,382	82,901	63,434	91,902	
DRAINAGE	MILES	20.559	97.625	17.495	135.679	4.502
	COST	1,279,038	2,238,669	359,634	3,877,341	7,439
	COST/MILE	62,213	22,931	20,556	28,577	1,652
FOUNDATION	MILES	19.422	120.280	17.495	157.197	
	COST	334,069	7,977,574	1,536,483	9,848,126	
	COST/MILE	17,200	66,325	87,824	62,648	
SURFACING	MILES	18.910	120.280	17.495	156.685	
	COST	126,852	8,818,809	2,778,091	11,723,752	
	COST/MILE	6,708	73,318	158,793	74,823	
RDSIDE DEVEL.	MILES	1.137	74.229	10.170	85.536	7.912
	COST	14,586	181,921	1,821	198,328	488,184
	COST/MILE	12,828	2,450	179	2,318	61,701
EROSION CTL.	MILES	20.559	116.327	17.495	154.381	46.085
	COST	341,518	742,725	125,336	1,209,579	143,365
	COST/MILE	16,611	6,384	7,164	7,835	3,110
TRAFFIC CTL.	MILES	20.047	120.280	17.495	157.822	46.085
	COST	8,500	1,728,484	268,552	2,005,536	17,700
	COST/MILE	424	14,370	15,350	12,707	384
FENCING	MILES	19.276	70.466	17.495	107.237	21.307
	COST	3,780	568,917	124,256	696,953	159,002
	COST/MILE	196	8,073	7,102	6,499	7,462
MISC.	MILES	3.475	29.147	10.170	42.792	4.502
	COST	35,985	810	6,290	43,085	57,611
	COST/MILE	10,355	27	618	1,006	12,796
BRIDGES	SQ. FEET					689,500
	COST					12,558,514
	COST/SQ. FOOT					18.213
ALL ITEMS	MILES	20.559	120.280	17.495	158.334	68.582
	COST	5,544,429	31,584,534	6,310,248	43,439,211	13,431,815
	COST/MILE	269,683	262,591	360,688	274,351	195,850

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969
PRIMARY SYSTEM

TABLE 4A

DECEMBER 31, 1970

COST ITEM		SURFACE TYPE GRAVEL	BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES		54.973	.177	55.150	.165
	COST		2,660,344	9,694	2,670,038	65,947
	COST/MILE		48,393	54,768	48,414	399,678
DRAINAGE	MILES		54.973	.177	55.150	.165
	COST		1,923,112	124,003	2,047,115	123,573
	COST/MILE		34,982	700,581	37,119	748,927
FOUNDATION	MILES		54.973	.177	55.150	.165
	COST		2,683,432	28,120	2,711,552	4,930
	COST/MILE		48,813	158,870	49,166	29,878
SURFACING	MILES		54.973	.177	55.150	.165
	COST		2,427,519	80,267	2,507,786	53,186
	COST/MILE		44,158	453,485	45,472	322,339
RDSIDE DEVEL.	MILES		8.400	.177	8.577	
	COST		180,948	6,136	187,084	
	COST/MILE		21,541	34,666	21,812	
EROSION CTL.	MILES		40.464		40.464	
	COST		149,640	200	149,840	9,484
	COST/MILE		3,698		3,703	
TRAFFIC CTL.	MILES		54.973	.177	55.150	279.138
	COST		1,130,108	23,889	1,153,997	339,783
	COST/MILE		20,557	134,966	20,924	1,217
FENCING	MILES		.854		.854	17.579
	COST		4,918		4,918	31,391
	COST/MILE		5,758		5,758	1,785
MISC.	MILES		4.995	.177	5.172	
	COST		29,300	39,350	68,650	48,600
	COST/MILE		5,865	222,316	13,273	
BRIDGES	SQ. FEET					32,992
	COST					605,057
	COST/SQ. FOOT					18.339
ALL ITEMS	MILES		54.973	.177	55.150	296.848
	COST		11,189,321	311,659	11,500,980	1,281,951
	COST/MILE		203,542	1,760,785	208,539	4,318

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969

TABLE 4C SECONDARY SYSTEM DECEMBER 31 1970

COST ITEM		SURFACE TYPE GRAVEL	 BITUM. MIX	 CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES	14.362	87.135		101.497	
	COST	169,263	2,034,096		2,203,359	
	COST/MILE	11,785	23,344		21,708	
DRAINAGE	MILES	14.362	87.135		101.497	
	COST	50,008	767,783		817,791	27,864
	COST/MILE	3,481	8,811		8,057	
FOUNDATION	MILES	14.362	87.135		101.497	
	COST	70,802	1,187,347		1,258,149	2,100
	COST/MILE	4,929	13,626		12,395	
SURFACING	MILES	14.362	87.135		101.497	
	COST	1,257	1,868,082		1,869,339	
	COST/MILE	87	21,438		18,417	
RDSIDE DEVEL.	MILES		9.272		9.272	
	COST		13,526		13,526	
	COST/MILE		1,458		1,458	
EROSION CTL.	MILES	8.519	77.002		85.521	.825
	COST	1,185	84,460		85,645	9,615
	COST/MILE	139	1,096		1,001	11,654
TRAFFIC CTL.	MILES	14.362	87.135		101.497	346.200
	COST	7,763	235,161		242,924	108,819
	COST/MILE	540	2,698		2,393	314
FENCING	MILES		4.345		4.345	3.920
	COST		6,000		6,000	7,986
	COST/MILE		1,380		1,380	2,037
MISC.	MILES		2.966		2.966	.030
	COST		1,000		1,000	64,900
	COST/MILE		337		337	2,163,333
BRIDGES	SQ. FEET					20,721
	COST					378,735
	COST/SQ. FOOT					18.277
ALL ITEMS	MILES	14.362	87.135		101.497	351.095
	COST	300,278	6,197,455		6,497,733	600,019
	COST/MILE	20,907	71,124		64,018	1,708

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY NUMBER OF TRAFFIC LANES DURING CALENDAR YEAR 1969

TABLE 5

DECEMBER 31, 1970

NO. LANES	MILES	COST	COST/MILE
INTERSTATE SYSTEM			
2	.733	74,344	101,424
4	84.339	27,266,852	323,300
TOTAL	85.072	27,341,196	321,388
PRIMARY SYSTEM			
2	36.978	6,726,664	181,909
4	8.576	4,422,992	515,740
TOTAL	45.554	11,149,656	244,756
SECONDARY SYSTEM			
2	74.433	5,834,076	78,380
4			
TOTAL	74.433	5,834,076	78,380
ALL SYSTEMS			
2	112.144	12,635,084	112,668
4	92.915	31,689,844	341,062
TOTAL	205.059	44,324,928	216,156

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6
INTERSTATE SYSTEM
DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
TIMB. GIRD.	X001	1	588	2,353	4.001
CONC. SLAB	X220	10	31,902	392,193	12.293
CONC. GIRD	X221	1	4,940	62,257	12.602
STEEL GIRD.	X031	4	89,658	1,853,664	20.674
	X131	4	22,648	412,664	18.220
	X631	1	5,124	399,164	77.900
	X731	1	9,792	127,675	13.038
	X931	2	64,144	1,219,719	19.015
COMP. S/C GIRD.	X071	4	106,352	2,383,049	22.407
	X771	5	50,424	833,691	16.533
	X971	[illegible]	98,904	2,264,619	22.897
CONC. PRESTR. GIRD.	X081	[illegible]	18,209	241,474	13.261
	X281	[illegible]	67,993	797,888	11.734
	X481	4	36,012	416,661	11.570
	X781	8	70,182	900,338	12.828
	X981	[illegible]	12,628	235,105	18.617
		63	689,500	12,542,514	18.190

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6A PRIMARY I SYSTEM DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	2	3,060	150,103	49.053
STEEL-CONC. SLAB	X040	2	3,400	95,932	28.215
CONC. PRESTR. GIRD.	X081	3	16,412	226,761	13.816
	X181	1	10,120	132,261	13.069
		8	32,992	605,057	18.339

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6C SECONDARY SYSTEM DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	1	930	50,488	54.288
CONC. PRESTR. GIRD.	X081	3	19,791	324,147	16.378
		4	20,721	374,635	18.079

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6D ALL SYSTEMS DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
TIMB. GIRD.	X001	1	588	2,353	4.001
CONC. SLAB	X020	3	3,990	200,591	50.273
	X220	10	31,902	392,193	12.293
CONC. GIRD	X221	1	4,940	62,257	12.602
STEEL GIRD.	X031	4	89,658	1,853,664	20.674
	X131	2	22,648	412,664	18.220
	X631	1	5,124	399,164	77.900
	X731	1	9,792	127,675	13.038
	X931	2	64,144	1,219,719	19.015
STEEL-CONC. SLAB	X040	2	3,400	95,932	28.215
COMP. S/C GIRD.	X071	4	106,352	2,383,049	22.407
	X771	5	50,424	833,691	16.533
	X971	2	98,904	2,264,619	22.897
CONC. PRESTR. GIRD.	X081	11	54,412	792,382	14.562
	X181	1	10,120	132,261	13.069
	X281	12	67,993	797,888	11.734
	X481	4	36,012	416,661	11.570
	X781	8	70,182	900,338	12.828
	X981	1	12,628	235,105	18.617
		75	743,213	13,522,206	18.194

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1969

TABLE 7A

DECEMBER 31, 1970

SYSTEM - INTERSTATE

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	24.389	$ 6,230,885	$ 255,479
1000-1499	5.397	$ 1,816,194	$ 336,519
1500-1999	22.432	$ 5,564,467	$ 248,059
2000-2999	32.854	$ 13,729,650	$ 417,898
3000-4999	.000		
5000-OVER	.000		
TOTAL	85.072	$ 27,341,196	$ 321,388

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1969

TABLE 78

DECEMBER 31, 1970

SYSTEM - PRIMARY I

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	5.918	$ 919,663	$ 155,400
0400-0499	7.734	$ 1,475,527	$ 190,784
0500-0999	14.801	$ 2,206,526	$ 149,079
1000-1499	.000		
1500-1999	2.592	$ 983,112	$ 379,287
2000-2999	8.388	$ 1,906,552	$ 227,295
3000-4999	1.471	$ 992,099	$ 674,438
5000-OVER	4.650	$ 2,666,177	$ 573,371
TOTAL	45.554	$ 11,149,656	$ 244,756

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY AVERAGE DAILY TRAFFIC (NEW OR RECONSTRUCTED ROADWAY ONLY) DURING CALENDAR YEAR 1969

TABLE 7D

DECEMBER 31, 1970

SYSTEM -- SECONDARY

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	43.386	$ 2,972,636	$ 68,516
0100-0199	26.221	$ 2,190,011	$ 83,521
0200-0299	.000		
0300-0399	3.920	$ 508,276	$ 129,662
0400-0499	.689	$ 109,962	$ 159,596
0500-0999	.000		
1000-1499	.217	$ 53,191	$ 245,119
1500-1999	.000		
2000-2999	.000		
3000-4999	.000		
5000-OVER	.000		
TOTAL	74.433	$ 5,834,076	$ 78,380

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF CONTRACTED AND NON-CONTRACTED COSTS BY SYSTEM DURING CALENDAR YEAR 1969

TABLE 8

DECEMBER 31, 1970

SYSTEM	CONTRACTED COST	NON CONTRACTED COST	TOTAL
INTERSTATE	$ 56,405,157	$ 6,152,890	$ 62,558,047
PRIMARY I	$ 12,707,034	$ 1,352,894	$ 14,059,928
SECONDARY	$ 7,047,282	$ 760,222	$ 7,807,504
TOTAL	$ 76,159,473	$ 8,266,006	$ 84,425,479